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NOMINATION OF VAUN A. NEWILL

HEARING BEFORE THE COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS UNITED STATES SENATE NINETY-NINTH CONGRESS

SECOND SESSION

ON

THE NOMINATION OF VAUN A. NEWILL TO BE ASSISTANT ADMINISTRATOR FOR RESEARCH AND DEVELOPMENT, ENVIRONMENTAL PROTECTION AGENCY

SEPTEMBER 29, 1986

Printed for the use of the Committee on Environment and Public Works



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CONTENTS

	Page
Stafford, Hon. Robert T., U.S. Senator from the State of Vermont, opening statement of	1
Newill, Dr. Vaun A., nominee for Assistant Administrator for Research and Development, Environmental Protection Agency	2
Written statement	10
Responses to:	
Committee questionnaire	17
Additional questions from:	
Senator Symms	30
Senator Burdick	33
Senator Baucus	36

NOMINATION OF VAUN NEWILL

MONDAY, SEPTEMBER 29, 1986

U.S. SENATE,
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS,
Washington, DC.

The committee met, pursuant to notice, at 11:12 a.m., in room 406, Dirksen Senate Office Building, Hon. Robert T. Stafford (chairman of the committee) presiding.

Present: Senator Stafford.

OPENING STATEMENT OF HON. ROBERT T. STAFFORD, U.S. SENATOR FROM THE STATE OF MAINE

Senator STAFFORD. The committee will come to order.

Good morning. Today's hearing is on the nomination of Dr. Vaun Newill to be Assistant Administrator for Research and Development at the Environmental Protection Agency.

I would like to welcome you to these proceedings, Dr. Newill. I look forward to hearing your views on the directions to be taken by the Office of Research and Development. The position for which you have been nominated is extremely important because the R&D program is critical to the effective performance of the EPA's programs. The basic function of this program is to produce analytical tools and knowledge necessary for regulating environmental pollution and protecting public health. The Office must also sustain long-term research efforts to further our understanding of the environment and of ourselves.

Dr. Newill, in reviewing your employment, which is varied and distinguished, I was pleased to see that you were previously employed by the EPA for more than 4 years, and prior to coming to the Agency you were also involved with air pollution control. The issue of acid rain control is of utmost importance to this Senator and the committee, and I would hope that you could apply your expertise in working with us to produce a sound solution to this serious national environmental problem.

I look forward to hearing your statement and views of the Agency's research needs and priorities.

I will reserve at this point, to any members of the committee who wish to, the opportunity to insert statements in the record.

STATEMENT OF VAUN A. NEWILL, M.D., NOMINEE FOR ASSISTANT ADMINISTRATOR FOR RESEARCH AND DEVELOPMENT, ENVIRONMENTAL PROTECTION AGENCY

Dr. NEWILL. Thank you. Mr. Chairman and members of the committee, I am honored to appear before you as you consider my nomination for the position of Assistant Administrator for Research and Development of the Environmental Protection Agency. I would like to take this opportunity to describe briefly my background and make some other comments.

In 1955, after completion of my medical training at the University of Pittsburgh, I joined the faculty of the School of Medicine at Western Reserve University with appointments both in medicine and preventive medicine. With the exception of a 1-year leave of absence, I spent most of the following 10 years at Western Reserve. A year's leave was devoted to additional training, primarily in epidemiology, at the Harvard University School of Public Health.

In 1965 I joined the U.S. Department of Health, Education, and Welfare's Division of Air Pollution, and was assigned to Japan. Upon my return to the United States in 1967, I continued to work with HEW, first in the National Center for Air Pollution Control and then the National Air Pollution Control Administration. The Administration became part of the newly formed Environmental Protection Agency in December 1970.

During the next 4 years at EPA I worked on a broad spectrum of issues, both in the Office of Research and Monitoring and as a special assistant for health affairs to the EPA Administrator. During this time I also served on assignment to the President's Office of Science and Technology and the Office of Energy Research and Development.

From September 1974 through August 1986, I was an employee of the Exxon Corp. Until 1981 I was in Exxon's Research and Environmental Health Division, serving as director from May 1978 through March 1981. From then until May 1985 I was associate medical director in New York. I was then assigned to London, England, as director of Esso Europe's Occupational and Environmental Health Department.

All the positions to which I have referred have dealt with preventive medicine and environmental health. In addition, over the years, I have held university appointments in these areas at Western Reserve University, Harvard University, the University of North Carolina, and New York University. I have also served as a member of EPA's Clean Air Science Advisory Committee.

Over the past 16 years, Congress has entrusted to EPA a growing responsibility for protecting the Nation's public health and environment from the risks posed by a broad range of substances. The task of providing the sound scientific basis needed for EPA's regulatory activities is the responsibility of the Office of Research and Development. I have been fortunate in that my combined experience in academia, industry, and the Federal Government has provided me with several perspectives on the operation and performance of EPA and the Office of Research and Development. These experiences have allowed me to form some observations about the

critical role of science and research in environmental regulatory decisionmaking.

Science and technological understanding is at the core of most major programmatic decisions made in EPA. Ideally, the risk assessment part of the risk assessment/risk management dichotomy for decisionmaking is purely a scientific and technical exercise. Associated with most assessments is a large array of issues that run the gamut from detection limits of instruments through environmental chemistry mechanisms and human health effects to cost effectiveness of alternative control technologies.

To maintain its credibility, the Agency must seek to accomplish certain ends with regard to the scientific and technical inputs to its decision processes. It must ensure that the latest information and results are introduced into the process and that these inputs are correctly analyzed, interpreted, and explained. In addition, however, if the Agency is to maintain its scientific and technical integrity over time, it must both maintain and sponsor research programs in those areas in which gaps in science or technology stand in the way of informed decisionmaking.

It is essential that EPA do a scrupulously good job in both these areas. It must keep abreast of the best science and technology, analyze and interpret that knowledge correctly, and explain it in a clear, unbiased fashion. It must also maintain an infrastructure that will allow it to improve its knowledge base through ongoing research. Since seldom will the available data provide answers to scientific questions of relevance to policy with the kind of confidence that is demanded in controlled experiments, answers to scientific questions can only be provided through the application of mature and well-informed scientific judgment.

It is the willingness of others to accept or reject that scientific judgment that establishes the Agency's credibility on major decisions. If the Agency does not maintain a good record in assembling and using the best scientific knowledge well, or in supporting research to address critical gaps in knowledge, credibility will erode and compromise the Agency's capacity to apply the scientific judgment necessary to make decisions that will gain acceptance by the public and the regulated community.

The Office of Research and Development has to play a strong role in both of these areas. It must use its scientific resources to assure that all available knowledge is brought to bear on decisionmaking, and it plays the predominant role in providing the Agency administration with scientific advice. It must, therefore, plan and implement a research program that will allow it to address future needs for scientific and technical data.

Both of these functions are extremely important. However, today I would like just briefly to discuss with you my observations with regard to the latter: the need to design and carry out a creditable research program at EPA.

My first observation is that the demand for more knowledge will always outpace the ability of the Agency to fund research. ORD will always have to set priorities for research and fund those studies of highest priority at the expense of leaving some questions for study either at a later time or by others.

My second observation is that the research program at EPA, of necessity, must first be an applied program, with its priorities set in close cooperation with its client regulatory offices.

My third observation is that any viable applied research program must devote some share of its energies to long-term and less directed studies that are relevant to the organization's mission. In this way the organization can develop the intellectual and scientific capital that will make possible effective, applied research in the future.

My final observation is that there is much environmental research that is carried out by universities, the private sector, and other government agencies. To be effective, ORD must seek and maintain creative ways to cooperate with these organizations in order to best achieve a common goal: Improved scientific and technological data and knowledge on which to base environmental policy and regulatory decisionmaking.

No small part of this function is the maintenance of a research program of a quality that is respected and supported by the outside research community and one that will attract and retain imaginative and talented scientists.

I mention these thoughts because they will form the framework within which I hope to carry out the responsibilities of the Assistant Administrator for Research and Development.

In saying that, please realize that I do not underestimate the scope or diversity of the intellectual and management challenges I face. From my few recent weeks as a consultant to EPA, I have been able to see how things have changed since I was last here. It is becoming increasingly clear to me that ORD's program has not only matured, but it has increased in importance and complexity.

It is inevitable that I will face difficult decisions regarding the allocation of scarce resources, the choices between alternative scientific approaches to addressing particular scientific issues, the tradeoffs between short- and long-term research, and the need to ensure quality in the planning and implementation of a large research program. I feel confident, however, that with the help of a vital ORD organization, a supportive Administrator, my fellow Assistant Administrators, and your support here in Congress, I will be able to chart a successful course.

I want to thank you for the opportunity to appear before you. If confirmed, I look forward to working with you, your colleagues, and your staffs to achieve EPA's important statutory responsibilities.

If you have any questions, I will be pleased to answer them.

Senator STAFFORD. Dr. Newill, if you are requested by any congressional committee to appear in front of it as a witness, would you be willing to do so?

Dr. NEWILL. I certainly would.

Senator STAFFORD. You say that without any reservation whatsoever?

Dr. NEWILL. I say that without any reservation.

Senator STAFFORD. I note in your statement that you spent 12 years in the employ of Exxon Corp.

Dr. NEWILL. Yes, sir.

Senator STAFFORD. I note on the last page of your statement your observation that things at EPA have changed a lot in recent years and it has become increasingly clear to you that the research and development program has not only matured but increased in importance and complexity.

Coming back to your involvement with Exxon, I think you have indicated in your background statement that you would recuse yourself from decisions involving Exxon or, if necessary, the oil industry. I assume you have given considerable thought to the situation here, and I have to ask you if you feel it would be necessary fairly frequently to recuse yourself in situations involving your duties at EPA.

Dr. NEWILL. Given the fact that I will be in research and development, I don't believe that I will have to recuse myself very frequently. But I certainly do not want to give the appearance of attending to things where there might be a conflict.

Senator STAFFORD. Would you feel that your long duty with Exxon would in any way create a conflict of interest between your former duties there and an assignment now as the Assistant Administrator of EPA for Research and Development?

Dr. NEWILL. I really do not. In the program that we were putting on there, we were looking at the things that were protective of the health of our employees, and this is the same thing that we do here now except it is extended to the general public.

Senator STAFFORD. What you are saying, I guess, is that research and development in terms of health and the environment would be about the same whether you did them for Exxon or for the Agency; is that it?

Dr. NEWILL. The research process itself is the same.

Senator STAFFORD. Well, I think that might be the only question that could occur to my colleagues on the committee, the fact that, for so long a period, you did serve Exxon and at times there may be a difference of philosophical outlook between large corporations and the Environmental Protection Agency's duties, as we see them here in the committee.

This committee, Doctor, has twice reported legislation to control the sources of acid rain. We hold the position that we currently have sufficient information to make necessary the regulatory decisions to reduce the acidity of precipitation now damaging or killing irreplaceable resources. As you know, the administration's position has been that existing scientific and technical knowledge is inadequate and we should postpone action indefinitely until all the data is in and we possess absolute certainty.

You have had extensive personal experience in the area of air quality, if not acid rain specifically. So, what is your personal opinion of the state of existing knowledge regarding the environmental problem, this environmental problem, relative to others? Do you believe a significant acid rain research program is still necessary, and would this be a priority for the research and development program under your leadership?

Dr. NEWILL. It is my opinion that we still do need a research program. When I was with the Agency before, I can remember some of the work that was done in the laboratories in North Carolina, where they showed even if we were able to reduce the ambient

sulfur dioxide levels to extremely low levels, it still would contribute a fair amount to the acidity of rain. I do not think that we have changed that, although I would like the opportunity to review that with those scientists to see what has been learned since, in the 12-year period that I have not had discussions with them.

But given that kind of information, I think that we really do need to know a fair amount more on the research side in order to know exactly how to implement the regulatory program.

Senator STAFFORD. While you were at Exxon, was there any scientific research on the question of acid rain conducted by Exxon Corp.?

Dr. NEWILL. I don't believe there was research that was carried out by Exxon, but I believe that they did have scientists within the research and engineering company that really stayed on top of what was happening in that area. I was not actually working with them, as such.

Where I hit acid rain probably a little bit more recently has been in Europe, working somewhat with the Concawe organization, and I think that the feeling there on the industrial side was that we still didn't have enough information to know the actions that were needed. The feeling was that just lowering SO_2 and NO_x is not going to bring about the changes that we want; there is going to have to be a broader regulatory program than that.

Senator STAFFORD. One of the most frequently heard indictments of EPA's research and development programs is that it lacks an adequate long-term research component. One of the functions of the office should be to build that capability to anticipate problems and solutions. However, the office has primarily served the immediate information needs of the other program offices.

Dr. Newill, you have indicated the importance of both functions in your statement. How would you characterize the current mix of these functions in the R&D program, and do you believe more emphasis is needed on basic long-term research?

Dr. NEWILL. Again, I have only been with the Agency for about 5 weeks as a consultant, and have not gone through the program in any great depth. It is still my feeling that long-term research is not represented there. I feel that some of this is, in fact, needed and it will be one of my priorities to try to establish some, particularly in the ecological research area.

Senator STAFFORD. Do you regard EPA's laboratories as being an important element in the office's long-term research effort?

Dr. NEWILL. Absolutely.

Senator STAFFORD. Over the past several years, EPA has moved in the direction of reliance on risk assessment methodologies as a significant element of their regulatory decisionmaking. Members of this committee have been concerned about this direction because of the difficulty of appropriately representing human health impacts and the danger of placing insufficient value on them.

You were previously involved in developing risk assessment tools for the Agency, and you have also referred to it in your testimony. Would you describe your view of the appropriate use of risk assessment methodologies in environmental decisionmaking and the role of the R&D office in developing such methodologies? Do you believe

any more or less emphasis should be placed on risk assessment in the R&D program?

Dr. NEWILL. I guess I feel rather strongly that risk assessment is a way to put some consistency into the regulatory decisionmaking. I admit that it also is a very severe taskmaster because it also points out the gaps in our knowledge and the amount of uncertainty we have about some of the information that we do have.

However, it does allow us to—it forces us to—make our reasoning explicit so that it can be seen reviewed by everybody and other people can interact with us in those judgments. So I think that it's an important part of the process. I think it is an appropriate way for the Agency to be moving in terms of the decisionmaking for regulation.

Senator STAFFORD. You have had an opportunity in your diverse career in academia, Government, and industry to view environmental and public health protection from research, regulatory, and management perspectives. Having had these various vantage points, is there a particular body of information that you believe needs to be developed to enhance environmental decisionmaking and that you would want to see the R&D office focus more attention on?

Dr. NEWILL. I am not sure that I am ready to answer that question off the top of my head, Senator.

Senator STAFFORD. I was about to say, Doctor, if you want to reflect today and answer in writing, it would be agreeable to me. But we need your answers as quickly as possible if we are to have even any chance of getting your name on the floor of the Senate.

Dr. NEWILL. All right.

Senator STAFFORD. We are looking at the last few days of this Congress, I suspect.

[Dr. Newill supplied the following:]

RESEARCH NEEDS

You have had an opportunity in your diverse career in academia, Government, and industry to view environmental and public health protection from research, regulatory and management perspectives.

Having had these various vantage points, is there a particular body of information that you believe needs to be developed to enhance environmental decisionmaking and that you would want to see the R&D office focus more attention on?

Our knowledge in several areas of science is severely limited today such that attempts at sound environmental decisionmaking are often frustrated. One area is that of potential human health effects from long-term exposure to low levels of environmental chemicals. At the present time, a large number of bioassays and animal tests exist that can be carried out on a chemical basis, but our means of interpreting the results of such experiments is severely limited scientifically. The current practice is undertaken largely on the basis of rule of thumb consensus, use of margins of safety, and simple statistical extrapolations rather than by means rooted in thorough scientific analysis. In my opinion, much theoretical and empirical research needs to be carried out to try to continually reduce the amount of subjective judgment required by current knowledge and methods.

In addition, our exposure assessment capability needs fundamental development. We must better be able to ascertain the degree of delivery of these chemicals of concern to potentially vulnerable organs or systems within the body itself.

Another major area which I believe needs further research is that of ecology, particularly at the ecosystem level. Most of our knowledge about potential environmental effects of chemicals is based on species level toxicology-carried out in laboratory testing. Good environmental decisionmaking, however, should incorporate information on impacts on populations of species and their interactions and on ecosystems. Such integrative research is needed at both the laboratory and field level. We have

made considerable progress in the development of human health risk assessment and have seen the effect these techniques have had on EPA's regulatory activities. I believe that now, the development of ecological risk assessment methods is of similar importance, so as to allow the agency to deal with ecological impacts in a commensurable way.

In addition, I see a lot of our environmental decisionmaking being driven more by what we can measure than by what actual environmental contamination exists. We know there are many chemicals we don't measure by the work horse tool of gas chromatography/mass spectroscopy [GCMS] because they chemically degrade in the GC or they are nonvolatile or highly polar compounds. We need improved measurement methods that will allow us to more fully and accurately characterize all chemicals in the environment and thus make better informed decisions.

Finally, I see a gap in our ability to destroy toxic chemicals rather than simply create temporary storage and disposal sites. Research on technologies to stabilize wastes chemically or destroy them thermally is needed to provide more acceptable long-term solutions to this major societal problem.

Senator STAFFORD. Health effects research, the Safe Drinking Water Act amendments which were recently enacted required EPA to issue 83 drinking water standards within 3 years. This deadline emerged out of the frustration with past inactivity which the Agency attributed, in part, to the lack of adequate health effects data. Virtually all programs at EPA suffer from this serious constraint.

What priority would you place on health effects research in the Office, and do you believe that there are means to expedite this research to assist the regulatory programs?

Dr. NEWILL. Again, this is one that I would like to answer in writing, if I may.

Senator STAFFORD. All right.

[Dr. Newill supplied the following:]

HEALTH EFFECTS RESEARCH

The Safe Drinking Water Act Amendments which were recently enacted required EPA to issue 83 drinking water standards within 3 years. This deadline emerged out of the frustration with past inactivity which the Agency attributed in part to the lack of adequate health effects data. Virtually all programs at EPA suffer from this serious constraint.

What priority would you place on health effects research in the Office and do you believe that there are means to expedite this research to assist the regulatory programs.

Many of EPA's regulatory activities are intended to protect the public health, whether a threat be from drinking water contamination, improper disposal of hazardous materials, or contaminants of the ambient air. Because health considerations play such a major role in the Agency's regulatory responsibilities, I will continue the high priority given to health related research in the Office of Research and Development [ORD].

The conduct of useful health research, however, is very resource intensive. Accordingly, the Agency must not only make the most efficient use of its in house resources, but must also depend on research outside the Agency, in the academic community and other governmental agencies. EPA can use its extramural resources to extend our research capabilities to be more fully responsive to Agency regulatory needs. In the course of these activities, to the degree the science allows, every effort must be made to plan EPA research so as to meet regulatory needs.

Senator STAFFORD. Let me come back to your employment at Exxon. As a result of any of the research you did there, would you find yourself in any sort of mental conflict in carrying out the duties of Assistant for Research and Development at EPA?

Dr. NEWILL. No, sir.

Senator STAFFORD. You make that statement without any reservation?

Dr. NEWILL. Yes, sir.

Senator STAFFORD. Are you aware of any other interests you may have, holdings you may own, that would place you in any conflict of interest, if confirmed in this responsibility?

Dr. NEWILL. None.

Senator STAFFORD. All right, sir. I have no further questions. On the one or two that you asked for time, I again suggest that you respond as quickly as you can because the clock is running on all of us here and we don't know whether we'll be here next week or not. There is a chance we may not.

The committee stands adjourned.

[Whereupon, at 11:34 a.m., the committee was adjourned.]

Statement

of

Vaun A. Newill, M.D.

for Confirmation

as

Assistant Administrator for Research and Development

before the

Committee on Environment and Public Works

United States Senate

September 29, 1986

Mr. Chairman and Members of the Committee, I am honored to appear before you as you consider my nomination for the position of Assistant Administrator for Research and Development of the Environmental Protection Agency. I would like to take this opportunity to describe briefly my background and make some other comments.

In 1955, after completion of my medical training at the University of Pittsburgh, I joined the faculty of the School of Medicine at Western Reserve University with appointments both in medicine and preventive medicine. With the exception of a one-year leave-of-absence, I spent most of the following ten years at Western Reserve. A year's leave was devoted to additional training, primarily in epidemiology, at the Harvard University School of Public Health.

In 1965, I joined the U.S. Department of Health, Education and Welfare's Division of Air Pollution and was assigned to Japan. Upon my return to the United States in 1967, I continued to work with HEW, first in the National Center for Air Pollution Control and subsequently in the National Air Pollution Control Administration. The Administration became part of the newly formed Environmental Protection Agency (EPA) in December 1970. During the next four years at EPA, I worked on a broad spectrum of issues, both in the Office of Research and Monitoring, and as a Special Assistant for health affairs to the EPA Administrator. During this period, I also served on assignment to the President's Office of Science and Technology and the Office of Energy Research and Development.

-2-

From September 1974 through August 1986 I was an employee of the Exxon Corporation. Until 1981 I was in Exxon's Research and Environmental Health Division, serving as Director from May 1978 through March 1981. From then until May 1985, I was Associate Medical Director in New York. I was then assigned to London, England as Director of Esso Europe's Occupational and Environmental Health Department.

All the positions to which I have referred have dealt with preventive medicine and environmental health. In addition, over the years, I have held University appointments in these areas at Western Reserve University, Harvard University, the University of North Carolina and New York University. I have also served as a member of EPA's Clean Air Scientific Advisory Committee (CASAC).

Over the past sixteen years, Congress has entrusted to EPA a growing responsibility for protecting the nation's public health and the environment from the risks posed by a broad range of substances. The task of providing the sound scientific basis needed for EPA's regulatory activities is the responsibility of the Office of Research and Development (ORD).

I have been fortunate in that my combined experience in academia, industry and the federal government has provided me with several perspectives on the operations and performance of EPA and the Office of Research and Development. These experiences have allowed me to form some observations about the critical role of science and research in environmental regulatory decision making.

Scientific and technological understanding is at the core of most major programmatic decisions made in EPA. Ideally, the risk assessment part of the risk assessment/risk management dichotomy for decision making is purely a scientific and technical exercise. Associated with most assessments is a large array of issues that run the gamut from detection limits of instruments through environmental chemistry mechanisms and human health effects to cost effectiveness of alternative control technologies. To maintain its credibility, the Agency must seek to accomplish certain ends with regard to the scientific and technical inputs to its decision processes. It must insure that the latest information and results are introduced into the process and that these inputs are correctly analyzed, interpreted and explained. In addition, however, if the Agency is to maintain its scientific and technical integrity over time, it must both maintain and sponsor research programs in those areas in which gaps in science or technology stand in the way of informed decision making.

It is essential that EPA do a scrupulously good job in both these areas. It must keep abreast of the best science and technology, analyze and interpret that knowledge correctly and explain it in a clear, unbiased fashion. It must also maintain an infrastructure that will allow it to improve its knowledge base through ongoing research. Since seldom will the available data provide answers to scientific questions of relevance to policy with the kind of confidence that is demanded in controlled experiments, answers to scientific questions can only be provided through the application of mature and well informed scientific judgement.

It is the willingness of others to accept or reject that scientific judgement that establishes the Agency's credibility on major decisions. If the Agency does not maintain a good record in assembling and using the best scientific knowledge well, or in supporting research to address critical gaps in knowledge, credibility will erode and compromise the Agency's capacity to apply the scientific judgement necessary to make decisions that will gain acceptance by the public and the regulated community.

The Office of Research and Development has to plan a strong role in both of these areas. It must use its scientific resources to assure that all available knowledge is brought to bear on decision making, and it plays the predominant role in providing the Agency administration with scientific advice. It must therefore plan and implement a research program that will allow it to address future needs for scientific and technical data. Both of these functions are extremely important. However, today I would like to just briefly discuss with you my observations with regards to the latter: the need to design and carry out a credible research program in EPA.

My first observation is that the demand for more knowledge will always outpace the ability of the Agency to fund research. ORD will always have to set priorities for research and fund those studies of highest priority at the expense of leaving some questions for study either at a later time or by others.

-5-

My second observation is that the research program in EPA, of necessity, must first be an applied program, with its priorities set in close cooperation with its client regulatory offices.

My third observation is that any viable applied research program must devote some share of its energies to longer term and less directed studies that are relevant to the organization's mission. In this way, the organization can develop the intellectual and scientific capital that will make possible effective, applied research in the future.

My final observation is that there is much environmental research that is carried out by universities, the private sector and other governmental agencies. To be effective, ORD must seek and maintain creative ways to cooperate with these organizations in order to best achieve a common goal: improved scientific and technological data and knowledge on which to base environmental policy and regulatory decision making. No small part of this function is the maintenance of a research program of a quality that is respected and supported by the outside research community, and one that will attract and retain imaginative and talented scientists.

I mention these thoughts because they will form the framework within which I hope to carry out the responsibilities of the Assistant Administrator for Research and Development. In saying that, please realize that I do not underestimate the scope or diversity of the intellectual

-6-

and management challenges I face. From my few recent weeks as a consultant to EPA, I have been able to see how things have changed since I was last here. It is becoming increasingly clear to me that ORD's program has not only matured, but has increased in importance and complexity.

It is inevitable that I will face difficult decisions regarding the allocation of scarce resources; the choices between alternative scientific approaches to addressing particular scientific issues; the trade offs between short and longer term research; and the need to ensure quality in the planning and implementation of a large research program. I feel confident, however, that with the help of a vital ORD organization, a supportive Administrator, my fellow Assistant Administrators and your support here in Congress, I will be able to chart a successful course.

I want to thank you for the opportunity to appear before you. If confirmed, I look forward to working with you, your colleagues, and your staffs to achieve EPA's important statutory responsibilities.

If you have questions, I will be pleased to answer them. Thank you.

UNITED STATES SENATE
COMMITTEE ON ENVIRONMENT AND
PUBLIC WORKS

ROOM 410 DIRKSEN BUILDING

WASHINGTON, DC 20510

INFORMATION

REQUESTED OF PRESIDENTIAL
NOMINEES

In order to assist the Committee in its consideration of nominations, each nominee is requested to complete the attached Statement For Completion By Presidential Nominees. The Statement is intended to be publicly available. In the event that a nominee asks that a specific answer be kept confidential, he or she should notify the Chairman and Ranking Member.

The original and twenty-five (25) copies of the requested information should be made available to Honorable Robert T. Stafford, Chairman, Committee on Environment and Public Works, U.S. Senate, Washington, DC 20510 (Attn: Staff Director) as soon as possible.

UNITED STATES SENATE
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS
STATEMENT FOR COMPLETION BY PRESIDENTIAL NOMINEES

Name: NEWILL VAUN ARCHIE
(Last) (First) (Middle)

Position to which nominated: Assistant Administrator Date of Nomination: Sept. 15, 1986
Office of Research and Development
Home Address: c/o Joanne Foellmer, 5309 Willard Home phone: 202-479-0646
Avenue, Chevy Chase, MD 20815

Date of birth: Nov. 11, 1923 Place of birth: Mt. Pleasant, PA
(Day) (Month) (Year)

Marital status: Married Full name of spouse: Janet Cady Newill

Name and ages of children:

<u>Nancy Louise</u>	<u>25</u>
<u>James Frederick</u>	<u>22</u>
<u>William Vaun</u>	<u>21</u>

Education:

Institution	Dates attended	Degrees received	Dates of degrees
<u>Juniata College</u>	<u>9/40-8/43</u>	<u>B.S.</u>	<u>Aug. 1943</u>
<u>Univ. of Pittsburgh</u>	<u>1/44-4/47</u>	<u>MD</u>	<u>April 1947</u>
<u>Harvard Univ.</u>	<u>9/59-6/60</u>	<u>SMHyg</u>	<u>June 1960</u>

Employment record: List all positions held since college, including the title and description of job, name of employer, location, and dates. If you were terminated involuntarily from any position(s), please note the circumstances.

<u>Rotating Internship, St. Francis Hospital, Pittsburgh</u>	<u>1947-48</u>
<u>General Resident, Harrisburgh Polychronic Hospital</u>	<u>1948-50</u>
<u>U.S. Navy</u>	<u>1950-52</u>
<u>Medical Residency, V.A. Hospitals, Buffalo, NY & Cleveland, OH</u>	<u>1952-54</u>
<u>Attending, V.A. Hospital, Cleveland, Ohio</u>	<u>1955</u>

Employment record—Continued

Faculty Western Reserve Univ., Sch. Med., Cleveland, OH	1955-67
USDHEW, Div. of Air Pollution (Japan)	6/65-6/67
National Center for Air Pollution Control	7/67-6/68
National Air Pollution Control Administration	6/68-12/69
Environmental Protection Agency	12/70-8/74
- Two assignments in Executive Ofc. of President-OST and OERD	
- Last 18 months was a Special Asst. to Adm. for Health Affairs	
Exxon Corp. - Research and Environmental Health Div.	9/74-3/81
- Assoc. Med. Dir. and Director Operations Div.	4/81-5/85
- Medical Director, Esso Europe, Inc.	6/85-8/86

Honors and awards:

List significant scholarships, fellowships, honorary degrees, military medals, honorary society memberships, and any other special recognitions for outstanding service or achievement.

Delta Omega - Harvard School of Public Health, 1960

Memberships:

List significant memberships and offices held in professional, fraternal, business, scholarly, civic, charitable and other organizations.

Organization	Office held (if any)	Dates
Harvard University	Visiting Lecturer on Epidemiology-Selec. of Public Health	1960-1964
Univ. of North Carolina	Adj. Asst. Prof. on Epidemiology	1968-1975
New York University	Clinical Prof., Dept. of Environ. Sch. of Med.	1975-1986
SIAM Inst. for Mathematics and Society	Board of Directors	1976-1986
Am. and Local Med. Assocs.	None	
Am. Occupational Med. Assocs.	None	
Am. Preventive Med. Assocs.	None	

Qualifications: State fully your qualifications to serve in the position to which you have been named.
Didactic training in medicine and preventive medicine.
Practice of Preventive Medicine--10 years on Faculty, Western Reserve
Univ. School of Medicine (1955-64); 10 yrs. in government, mostly
environmentally-related activities (1965-74); 11 yrs. in industry
in occupational medicine (employee health and environmental activities).
Served on NRC/NAS, Environmental Studies Board and the Armed Forces
Epidemiological Board.

Future
employment
relationships:

1. Indicate whether you will sever all connections with your present employer, business firm, association or organization if you are confirmed by the Senate.

I have taken early retirement from Exxon Corp. and will continue to
receive my pension and other distributions that are part of that
retirement.

2. As far as can be foreseen, state whether you have any plans after completing government service to resume employment, affiliation or practice with your current or any previous employer, business firm, association or organization.

None

3. Has anybody made a commitment to you for a job after you leave government?

No

4. (a) If you have been appointed for a fixed term, do you expect to serve the full term?

Not a fixed term but it is my intent to stay at least until the end
of the Administration.

(b) If you have been appointed for an indefinite term, do you have any known limitations on your willingness or ability to serve for the foreseeable future?

None

(c) If you have previously held any Schedule C or other appointive position in the Executive branch, irrespective of whether the position required Congressional confirmation, please state the circumstances of your departure and its timing.

Office of Science and Technology, 1973. Organization was dissolved
January 1973 by Mr. Nixon.

Financial
Statement:

1. Attach a copy of your Executive Personnel Financial Disclosure Report (SF 278).

2. List sources, amounts and dates of all anticipated receipts from deferred income arrangements, stock options, uncompleted contracts and other future benefits which you expect to derive from previous business relationships, professional services and firm memberships or from former employers, clients, and customers. Amounts should be indicated by the categories established for reporting income on Form SF 278, Schedule A.

Exxon-Contingent Incentive Compensation 1987,88 (Est. about \$19k/yr.)
Stock options-5836 shares (spread est. \$100k). Financial Advisor 1 yr.
(Est. \$6k). Income Tax Advice (foreign assignment) (Est. \$2.5k). Death
Benefits to wife \$200k. Retirement annuities starting 1 Sept.'86
(Est. \$45k annually until my death). Wife survivor - continues at
\$12k/yr.

3. Are any assets pledged? (Add schedule).

No

4. Are you currently a party to any legal action?

No

5. Have you filed a Federal income tax return for each of the last 10 years? If not, please explain the circumstances.

Yes

6. Has the Internal Revenue Service ever audited your Federal tax return? If so, what resulted from the audit?

Yes. Twice. Nothing found and no additional money paid.

Potential conflicts
of interest:

1. Describe any financial or deferred compensation agreements or other continuing dealings with business associates, clients or customers who will be affected by policies which you will influence in the position to which you have been nominated.

None

2. List any investments, obligations, liabilities, or other relationships which might involve potential conflicts of interest, or the appearance of conflicts of interest, with the position to which you have been nominated.

Retirement from Exxon.

3. Describe any business relationship, dealing or financial transaction (other than taxpaying) which you have had during the last 10 years with the Federal Government, whether for yourself or relatives, on behalf of a client, or acting as an agent, that might in any way constitute or result in a possible conflict of interest, or an appearance of conflict of interest, with the position to which you have been nominated.

None

4. Explain how you will resolve any potential conflict of interest, or appearance of a conflict of interest, that may be disclosed by your responses to the above items.

Recuse myself from decisions involving Exxon or the oil industry, if necessary.

5. Explain how you will comply with conflict of interest laws and regulations applicable to the position for which you have been nominated. Attach a statement from the appropriate agency official indicating what those laws and regulations are and how you will comply with them. For this purpose, you may utilize a statement by the relevant agency Ethics Officer.

Recuse myself from Agency actions affecting Exxon Corporation.

Political affiliation and activities: List all memberships and offices held in, or financial contributions (in excess of \$1,000), and services rendered to any political party or election committee during the last 10 years.

None

Published writings:

List the titles, publishers and dates of any books, articles, or reports you have written. (Please list first any publications and/or speeches that involve environmental or related matters.)

See Attachment A.

Additional
Matters:

1. If there is any additional information which you believe may be pertinent to the Members of the Committee in reaching their decisions, you may include that here.

None

2. Do you agree to appear before all Congressional Committees which seek your testimony?

Yes

3. Having completed this form, are there any additional questions which you believe the Committee should ask of future nominees?

AFFIDAVIT

Vaun Archie Newill) ss, being duly sworn, hereby states that he/she has read and signed the foregoing Statement for Completion by Presidential Nominees including the Financial Statement and that the information provided therein is, to the best of his/her knowledge and belief, current, accurate, and complete.

Vaun Archie Newill

Subscribed and sworn before me this 17th day of September, 1986.

Barbara D. Judger
Notary Public

My Commission Expires February 14, 1989

Attachment A

Vaun A. Newill
Office of Research and Development

References to some papers that involve the environment.*

Terabe, M.; Oomichi, S.; Benson, F.B.; Newill, V.A.; Thompson, J.E.: Relationships between sulfur dioxide concentration determined by the West Gaeke and electroconductivity methods. J. Air Pollution Control Assoc., (United States), 17(10): 673-5, Oct. 1967.

Newill, V.A.: Air pollution control: The physicians role. Air Pollution Medical Research Conference sponsored by AMA. Oct. 5-7, 1970.

Newill, V.A.: Collaborative air pollution studies between United States and Japan, NAPCA, Durham, N.C. See citation no. 72-4TA-0703: 1288-1289, 1971.

Pearlman, M.E.; Finklea, J.F.; Shy, C.M.; Van Bruggan, J., and Newill, V.A.: Chronic oxidant exposure and epidemic influenza. Environmental Research (United States), 4(2): 129-40, April 1971, ISSN 0013-9351.

Benson, F.B.; Cohen, A.A.; Finklea, J.F.; Newill, V.A.; Riggin, W.B.; Shy, C.M.: Air pollution episodes. HSMHA Health Reports, 86(6): 537, Volume on Respiratory Disorders, June 1971.

Finklea, J.F.; Hasselblad, V.; Riggin, W.B.; Nelson, W.C.; Hammer, D.I.; Newill, V.A.: Cigarette smoking and hemagglutination inhibition response to influenza after natural disease and immunization. Am. Rev. of Respiratory Diseases (United States), 104(3): 368-76, Sept. 1971.

Nelson, W.C.; Lykins, M.H.; Mackay, J.; Newill, V.A.; Finklea, J.F.; Hammer, D.I.: Mortality among orchard workers exposed to lead arsenate spray: a cohort study. J. Chronic Diseases (United States), 26(2): 105-18, February 1973.

Newill, V.A.: Pollution's Price - The Cost in human health. Bulletin Atomic Scientists, 29, 8, 47-49, Oct. 1973.

Newill, V.A.: The U.S. and environmental pollution control, J. of Environ. Health, 36(4): 334-346, Jan./Feb. 1974.

Newill, V.A.: The susceptibility of the fetus and child to chemical pollutants. Nature and Source of Pollutants. Pediatrics, 53(5): 785-8, May 1974, ISSN 0031-4005.

* The complete list of Dr. Newill's publications is packed in files in his household goods which are currently crossing the Atlantic Ocean. The above list has been assembled by a single use of government and an industrial source. When available the complete list will be forwarded to the Committee.

- Newill, V.A.: Regulatory decision making: The scientists role. J. Wash. Academy of Science, 64(2): 31-48, 1974.
- Newill, V.A.: Health effects and energy choices: JAPCA 25(9): 914-917, September 1975.
- Newill, V.A.: The strengths and weaknesses of population studies in assessing environmental health effects. EPA, 401 M Street, SW, Washington, DC 20460 (Recent advances in the assessment of the health effects of environmental pollution. Vol. I, Luxemburg: Commission of the European Communities, Director General, Scientific and Technical Information and Information Management, 161-179, 1975.)
- Newill, V.A.: Methodologies of risk assessment. Annals, NY Academy of Science, 271: 413-417, 1976.
- Newill, V.A.: Future environmental quality monitoring as related to human health. International Conference on Environmental Sensing and Assessment; Vol. 2, NY Institute of Electrical and Electronic Engineers, 1976.
- Newill, V.A.: Way of detecting carcinogenic potential in human populations: How good is the correlation? The Cancer Bulletin, 29(6): 175-178, 1977.
- Newill, V.A.: Air quality standards. Air Pollution, Edited by A. Stern, V: 445-504, 1977.
- Newill, V.A.: Compliance from an industrial-managers viewpoint, Toxic Substances II, 246-251, 1978.
- Newill, V.A.; Wyzga, R.E.; McCarroll, J.R.: Costs versus benefits of sulfur oxides and related particulate matter control. Bull. NY Academy of Medicine, 54(11): 1211-1234, 1978.
- Newill, V.A.: Health aspects of other emissions from distillate fuels (with particular reference to diesel fuel). Bull. NY Academy of Medicine, 56(9): 912-913 and 935-938, 1980.
- Hanis, N.M.; Holmes, T.M.; Newill, V.A.; Smith, F.R.; Smith, L.G.: Brain cancer: issues and dilemmas. Annals NY Academy of Science, 381: 83-90, 1982.
- Newill, V.A.: Overview of occupational epidemiology: issues/dilemmas. Sanyo Ika Daigaku Zasshi (Japan), 5 Suppl.: 15-28, March 20, 1983.
- Newill, V.A.: Air pollution: A complex problem. Clean Air in Australia, 18(1): 3, February 1984.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

SEP 22 1986

OFFICE OF
GENERAL COUNSEL

MEMORANDUM

SUBJECT: Waiver Under 18 U.S.C. §208(b)(1)

FROM: Gerald H. Yamada *Gerald H. Yamada*
Deputy General Counsel
Designated Agency Ethics Official (LE-130)

TO: Dr. Vaun A. Newill
Assistant Administrator Designate for
Research and Development (RD-672)

The Executive Personnel Financial Disclosure Report (SF 278) you submitted in connection with your nomination as Assistant Administrator for Research and Development indicates that you own less than \$1000 worth of stock in the Centerior Corporation (formerly Cleveland Electric).

As you are aware, 18 U.S.C. §208(a) prohibits government employees from participating in a "particular matter" which affects their financial interest. The term "particular matter" includes a policy or rulemaking matter which distinctively affects an industry, such as a New Source Performance Standard, as well as a matter which involves an entity as a specific party, such as a permit or an enforcement proceeding.

Under 18 U.S.C. §208(b)(1) and 40 C.F.R. §3.301 I am authorized to waive the prohibition of 18 U.S.C. §208(a) where the interest is "not so substantial as to be deemed likely to affect the integrity of the services which the Government may expect." In this case, I have no difficulty determining that your interest in Centerior is "not so substantial," and a waiver is hereby granted.

In keeping with standard EPA practice, this waiver applies only to rulemaking or policy matters, and 18 U.S.C. §208(a) continues to bar your participation in an EPA matter which involves Centerior as a specific party. In addition, this waiver will cease to apply if the value of your Centerior stock should ever exceed \$10,000, and the waiver does not authorize you to purchase additional stock in Centerior or other firms in the electric utility industry.

cc: Office of Government Ethics

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

SEP 22 '83

OFFICE OF
GENERAL COUNSEL

David H. Martin, Director
Office of Government Ethics
P.O. Box 14108
Washington, D.C. 20044

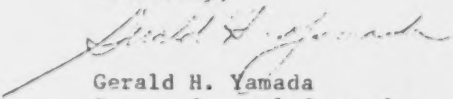
Dear Mr. Martin:

As required by 5 C.F.R. §734.604(c), I have reviewed the Executive Personnel Financial Disclosure Report submitted by Dr. Vaun A. Newill in connection with his nomination as Assistant Administrator for Research and Development of the Environmental Protection Agency.

Since Dr. Newill holds Exxon Corporation stock and receives retirement benefits from the Exxon Corporation, he has recused himself from participation in EPA matters which involve the Exxon Corporation as a specific party and rulemaking or policy matters which distinctively affect the oil industry. Dr. Newill also owns a small amount of stock (under \$1000) in the Centerior Corporation (formerly Cleveland Electric). He has recused himself from EPA matters which involve Centerior as a specific party, and I have granted a waiver under 18 U.S.C. §208(b)(1) to permit him to take part in rulemaking or policy matters which affect utilities.

Based on the waiver and the recusals, I have determined that the enclosed report is complete and discloses no likely conflict of interest under applicable statutes and regulations. A statement of the organization and functions of the Office of Research and Development is also enclosed, along with a copy of the waiver and a copy of Dr. Newill's recusal statement. Please call me at 475-8064 if you have any questions.

Sincerely,


Gerald H. Yamada
Deputy General Counsel
Designated Agency Ethics Official

Enclosures



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

SEP 22 1988

OFFICE OF
RESEARCH AND DEVELOPMENT

SUBJECT: Conflict of Interest

FROM: Vaun A. Newill *V.A. Newill*
Consultant
Office of Research and Development (RD-672)

TO: Lee M. Thomas
Administrator (A-100)

To avoid actual or apparent conflict of interest if I am confirmed as Assistant Administrator for Research and Development, I have recused myself in any matter which involves the Exxon Corporation or its affiliates as a specific party and from any rulemaking or policy matter which distinctly affects the oil industry. I have also recused myself from participation in any matter which specifically affects the Centor Corporation (includes the former Cleveland Electric Illuminating Company).

If any such matter arises, the authorization to act will be delegated to my Deputy.

cc: Gerald Yamada
Donnell Nantkes
Donald Ehreth
Courtney Riordan
ORD Office Directors

QUESTIONS FROM SENATOR STEVE SYMMS

QUESTION 1:

Dr. Newill, my understanding is that the science of indoor air pollution is still in its infancy -- that there have been very few systematic investigations of indoor air quality. Would you agree?

ANSWER:

Yes. EPA has conducted limited explorations of this area, and from what it has determined, has been developing a revised indoor air research plan. This should help EPA determine what is known, what remains to be learned, and what is the best way to obtain the necessary information.

QUESTION 2:

Would you also agree that, for the most part, federal and state efforts with respect to indoor air quality over the next several years should concentrate on scientific investigations rather than the development of control strategies?

ANSWER:

A full scale program to emphasize control strategies is not realistic until determinations have been made as to which sources are the greatest contributors to indoor air pollution. Certain sources, such as wood stoves and kerosene heaters, are known to contribute significantly to decrements in indoor air quality. In cases such as this, it is reasonable to begin work now to develop cost effective control techniques. I also believe that in order to develop a balanced research program, we must determine what research is necessary in exposure assessment, control technology and health effects.

QUESTION 3:

Would you agree that, while such scientific investigations are progressing, it is important that EPA and other federal agencies having responsibilities in this area endeavor to protect the developing science from political pressures or influences?

ANSWER:

Yes. But I must stress that I believe this to be true of all scientific enterprise, although clearly scientific effort at EPA must be undertaken in response to issues of public concern. ORD appears to be progressing in a procedurally proper fashion by holding independent scientific peer reviews of its research plans and relying on the competitive procurement process for needed contractual support.

QUESTION 4:

What steps should Congress take, or decline to take, to ensure that the developing science concerning indoor air quality is not distorted by political considerations?

ANSWER:

Congress has followed the path of indoor air research conscientiously, particularly as regards the development of a coherent, interagency strategy for approaching this problem, including clear lines of managerial responsibility both within EPA and among all concerned agencies. EPA seems to be approaching the problem of indoor air research in a well-reasoned, technically sound fashion, and is also taking steps to strengthen the management of EPA's indoor air program so as to ensure strong leadership of this complex program. Given this background, it is my belief that the science can now be developed and that the individual agencies involved can keep their programs insulated from potentially distorting political considerations.

QUESTION 5:

In part because of the privacy interests that are at stake, but also in recognition of the appropriate role of the states with respect to indoor air quality matters, the federal approach to indoor air quality has been to sponsor research and to act as an information clearinghouse. By contrast, the federal government has taken a leading role in controlling outdoor pollution -- whether of air, land or water. Do you believe that that division of responsibilities is appropriate?

ANSWER:

At the present time, based on research data now available, it appears that a significant fraction of air pollution within the home arises from personal habits, such as smoking, use of air conditioning, hobbies, cleaning methods, etc. I personally do not think that government at any level should regulate such personal behavior within the home. The best that we can do in that environment is to educate people and hope that they take appropriate actions to protect themselves. In the instances in which we see an opportunity to regulate a source -- such as woodstoves, for instance -- EPA has taken an active stance. In the case of woodstoves, ORD is testing various ways to control emissions of hazardous compounds. In addition, the agency announced on September 30, 1986 that it intends to regulate particulate emissions from new woodstoves. It is possible that EPA may take a more active role in the future, especially as methods for determining total human exposures to pollutants evolve. However, how such an approach could be handled under the Clean Air Act is a question better dealt with by my counterparts in EPA's regulatory and policy offices.

QUESTION 6.

You have been an employee of the Exxon Corporation for about twelve years. Do you anticipate potential conflicts of interest and, if so, how do you intend to resolve them?

Do you expect that this previous employment might substantially impede your capacity to manage and participate in matters involving petrochemical pollution?

ANSWER:

To avoid actual or apparent conflicts of interest with regard to my relationship with the Exxon Corporation, I have recused myself from any matters which involve the Exxon Corporation or its affiliates as a specific party, and from any rulemaking or policy matter which distinctly affects the oil industry. If any such matters do arise, the authorization to act will be delegated to my Deputy.

QUESTIONS FROM SENATOR QUENTIN N. BURDICK

QUESTION 1:

This committee is concerned with environmental and health effects of acid rain. Has EPA conducted health related research on acid rain?

ANSWER:

In answering, I must stress that my knowledge of the EPA research program is still quite rudimentary. I am aware that, under the Clean Air Act, the Agency has been directed to protect public health from the harmful effects of six criteria pollutants, including sulfur dioxide (SO₂) and nitrogen oxides (NO_x). I have been informed that The National Acid Precipitation Assessment Program (NAPAP) has not revised or attempted to expand the well-established work of EPA on direct health effects of SO₂ and NO_x. Instead, it has focused its resources on the examination of potential indirect health effects, that is, effects arising from acidified waters. Through NAPAP, the Agency has supported the following indirect health effects studies:

- o a public water supply survey of the Northeast, performed by the New England Water Works Association, which sampled both surface and ground-water supplies: the study found no strong evidence of contamination;
- o an ongoing study of drinking water quality in cisterns, which is co-funded by the Tennessee Valley Authority;
- o an ongoing modeling project of trace metal speciation in acidic waters; and
- o an ongoing study of baseline bioaccumulation of mercury in fish, which is co-funded by the Fish and Wildlife Service.

A correlation between low pH and bioaccumulation of mercury in fish has been demonstrated, but the actual cause and geographic extent of the bioaccumulation phenomenon are not known. Since the state-of-the-art for mercury detection in water and sediments is inadequate, EPA has been unable to incorporate the measurement of mercury into the National Surface Water Survey. This is a fundamental research problem which needs to be addressed more fully.

The population at risk through drinking water effects of acidic deposition is not known. However, evidence to date appears to indicate that the potential risk is small.

QUESTION 2:

Several states, independent of EPA, have been developing their own data bases on acid rain. There seems to be some reluctance on EPA's part

to incorporate the data and provide funding to support such state research efforts. What role do you think states should play in acid rain research and do you think it possible to provide states limited funding to keep their programs operational?

ANSWER:

I have been informed that states are involved in two principal areas of data generation with respect to acid rain: deposition monitoring and emissions inventories. First, I will address deposition monitoring.

With the establishment of the Acid Deposition System (ADS) data base at Pacific Northwest Laboratories (PNL) EPA now has a central repository for deposition monitoring information. The Agency is making provisions to accept "qualified" state wet deposition data. That qualification includes using the National Acid Precipitation Assessment Program's (NAPAP) accepted protocols with appropriate quality assurance/quality controls. The previous reluctance to accept state data was based upon several considerations:

- o several states had not followed the established protocols; thus their data was inconsistent with other state data and incompatible for analysis within EPA's system; and
- o the National Trends Network (wet deposition) monitoring site criteria requires that stations be sited at least 50 kilometers from an urban area. In the highly urbanized Northeast, it is difficult to find sites that meet that specification.

At this time, ORD is working with EPA Regions III and IV to resolve the siting problems and to encourage states in those regions to use NAPAP protocols in the collection of their wet deposition data.

In the source emissions inventory area, during 1986 EPA provided a combination of research and development resources (\$700 thousand) and earmarked CAA Section 105 grant funds (\$500 thousand) to states to participate in developing a nationally consistent emissions inventory. This effort will result in an accurate and comprehensive inventory of state sources of SO_2 , NO_x , and VOCs and will be made available to all states. These data will assist states in analyzing acid deposition regulatory options.

In general, any cooperative effort between a state and EPA/NAPAP in acid rain research needs to provide data that meets the overall requirements of the national program. EPA values usable data that both extends its existing data bases and can be intercompared with them. Where possible, opportunities for cooperative efforts with ongoing state research programs are treated as valuable opportunities by EPA.

The role of acid rain research within states is best defined by each individual state. Clearly, each state has an interest in developing or refining its scientific and analytical capacity to evaluate regulatory options under various acid rain control scenarios. To assist states in this regard, EPA has initiated the State Acid Rain (STAR) program which solicited pro-

posals to develop mechanisms to analyze potential regulatory options. EPA has awarded \$3 million under CAA Section 105 for STAR program implementation.

As indicated above, EPA has provided states with funding for very specific research activities. Also, EPA has broadened its research program to cover all regions thought to be susceptible to acid deposition. This expanded program has allowed EPA to establish working relationships with many state agencies. These agencies have helped to guide the site selection and the design of many NAPAP-sponsored scientific activities within their respective states. In a number of cases, specific scientific projects identified by states have been funded by EPA/NAPAP. From my limited exposure to the program to date, it appears that the level of cooperation with the states is responsive to the issue of providing limited support for state programs.

QUESTION 3:

What emphasis will you place on further research on indoor air pollution?

ANSWER:

In September, EPA's Science Advisory Board (SAB) reviewed ORD's draft research plan, the preliminary design of its needs assessment, and its ongoing projects on indoor air pollution. ORD is expecting to receive the SAB's final report within the next few months. I look forward, as Assistant Administrator, to reviewing the report, and imagine that it will significantly influence the direction of future research in this area.

QUESTIONS FROM SENATOR MAX BAUCUS

QUESTION 1:

Please explain what policy changes will take place with you as director of the Office. What priorities do you have that are different from your predecessor? What are your goals as the AA for the Office of Research and Development?

ANSWER:

I have only just begun to become familiar with the operation of the Office of Research and Development. As a result, I am not yet in a position to discuss potential changes in policies or priorities. I can, however, address the issue of my general goals for the organization. I expect ORD to provide responsive and timely scientific and technical support to EPA's regulatory development and implementation efforts and continue to undertake critical research of the highest quality in order to advance our knowledge in environmental sciences. The success of such efforts is clearly dependent upon the efforts of a capable and committed staff. I hope to assure that the appropriate structures and incentives exist to work with employees and ensure their performance. I hope to ensure the existence of an ORD environment which attracts and retains the scientists needed to effectively undertake its mission.

QUESTION 2:

How will you ensure that new technologies are utilized to eliminate pollution instead of merely shifting it to other locations? What are the primary obstacles to implementing technologies that will reduce pollution instead of control it?

ANSWER:

Pollution elimination problems will inevitably arise as different legislative mandates conflict. ORD must ensure that its research is responsive to legislative mandates, but not restricted to one of a group of related issues. ORD research must be designed so as to be responsive to long term societal needs.

From what I have learned in my brief time at EPA, it appears that costs and lack of incentives are primary obstacles to wider implementation of pollution-reducing technologies. While we have not pushed available technologies to their limits, we have reached a point where achieving incremental reductions in pollution becomes quite expensive.

In order to achieve further reductions, I see two viable and complementary approaches. First, we might look for ways to provide industry with economic incentives to pollute less. This would encourage industry

to develop, test and implement pollution-reducing technologies. Second, we should continue to strengthen and improve our ability to assess risks of exposure to pollution. In this way, the "risk managers" of EPA will have the soundest scientific basis possible for weighing risk against costs and determining when further pollution reductions are necessary, even in light of increased costs.

QUESTION 3:

How much research should be done on waste reduction? Why is it currently such a low priority? Should the budget or waste reduction research be increased?

ANSWER:

Research on process changes which minimize the quantities of waste produced must be performed in order for waste reduction (minimization) to become a viable alternative to waste disposal. Due to the past thrusts of the RCRA regulatory program, which focused primarily on acceptable land disposal methods, EPA accorded waste minimization research a low priority. However, a Report to Congress is currently being prepared by the Agency on this subject, and the Science Advisory Board and the Office of Technology Assessment also have published recent reports. In light of these reports, the Office of Research and Development is reevaluating the need to increase its participation in such research and I look forward to that reevaluation.

QUESTION 4:

Mr. Craig Potter, AA for Air and Radiation, has said that ozone creates more complex problems than the EPA has dealt with for any other criteria air pollutants. Do you agree with Mr. Potter's assessment?

ANSWER:

While I am not familiar with the context in which Mr. Potter made this statement, I can agree with the spirit of it. Ozone occurs naturally in the atmosphere; indeed, the presence of ozone in the stratosphere is essential for our survival. Ozone is easily created in the presence of hydrocarbons and volatile organic compounds. It is equally easy to deplete ozone when it comes in contact with any of several compounds with which it reacts readily.

At the present time, many areas of the country are not in compliance with ozone attainment standards. To achieve compliance, it is likely that states will have to control not only ozone, but its precursors. Ozone has been known to be a major cause of damage to some trees and crops. There is also evidence that ozone may cause lasting health effects over time. Meanwhile, as we attempt to curtail ozone in the troposphere, we must look toward protecting the ozone layer in the stratosphere, lest we cause even more damage to health and welfare through increased levels of harmful ultraviolet radiation. All of these factors mean that the problems of ozone cannot be addressed naively or solved simply.

QUESTION 5:

What research activities are presently underway at the Office of Research and Development to address the problems of ozone? What research activities are proposed?

ANSWER:

In FY'86 and FY'87, ORD is conducting research in the following areas related to ozone: (1) modeling -- urban and regional ozone models are being completed, tested, and refined; (2) control technology -- better methods of controlling emissions of volatile organic compounds are being tested; (3) health effects -- the chronic effects of ozone exposure are being investigated, as well as effects of acute exposure to ozone on immune response, metabolism, and biochemistry; (4) environmental effects -- the study of the economic impact of ozone on cash crops (the National Crop Loss Assessment Network, or NCLAN) is winding down, the effect of varying levels of ozone and other environmental conditions on major crops continues; and (4) monitoring -- monitoring support and quality assurance is being provided to regions, states, and the program office. As part of the stratospheric modification research program, the following are underway: (1) field, laboratory, and modeling studies of the effects of UV-B radiation on sensitive crops; (2) dose-response studies of UV-B and marine and aquatic food webs; (3) human immunotoxicity and genotoxicity studies of UV-B; (4) studies of the influence of increased UV-B on ozone attainment problems; and (5) a technical workshop on NO₂ emissions and stratospheric chemistry.

QUESTION 6:

Do you feel the Administration needs to assess its policy of conducting more research on the effects of ozone on 1) human health, 2) crop damage, 3) forest damage?

ANSWER:

Recent evidence suggests that ozone presents a greater threat to human health and welfare than previously believed. I do not believe this information can be ignored. It was a recognition of the importance of ozone as a problem which led us to develop a forest effects research program. On

the subject of crop damage research, EPA has been phasing down this effort because the evidence suggests that the possible threat to forests should be a higher priority in the future. The crop work which remains is the minimum needed by the program office to evaluate secondary standards based on crop effects.

QUESTION 7:

Do you feel the Administration needs to reconsider the national standard for ozone levels? Would you recommend tightening the standards?

ANSWER:

The Office of Air and Radiation (OAR) has stated that ozone research is one of their highest priorities for FY'87 because they believe that additional research is needed on several key issues before a regulatory decision can be made. In view of the complexities associated with ozone's interactions and the difficulties we are facing in attaining the current standard, I believe that OAR's position is a reasonable one.

QUESTION 8:

What are the proper roles of the Federal, State, and local governments in implementing the results of research and development projects?

ANSWER:

Results of research and development projects can be applied in many different contexts depending on the nature of the problem being studied. At the federal level, for example, the results of research projects are used to support the setting of reasonable standards and regulations. Research is critical to establishing ambient air quality standards, water quality criteria, regulations for handling hazardous waste, and so on.

Some research is more localized in nature and may help particular states or local governments establish specifically tailored control strategies. Examples of research falling into this category include EPA's past work on the Chesapeake Bay and studies of the transport and transformation of air emissions in the Kanawha Valley, West Virginia.

Many of the results of ORD's research into technology and methods are ultimately applied at the local level. I have been informed that, in order to facilitate this, the Agency has an active technology transfer program whereby it holds workshops and seminars to inform state and local government officials of the latest research findings. Through technology transfer, EPA is attempting to build strong federal/state/ local government partnerships to share in the knowledge gained from its research.

In summary, research results are used by the federal government to set standards and regulations that should be applied nationally and this appears to be a large part of what ORD does. It also conducts research that bears directly on localized problems; this is of great interest to the states specifically affected. Finally, through technology transfer programs ORD tries to share information with its state and local government counterparts on the latest available research results.

